

Amendments To The Specification

Please replace paragraph [0001] with the following amended paragraph:

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The present application claims the benefit of U.S. Provisional Patent Application Serial No. 60/247,331, filed November [[20]]10, 2000 ~~in the name of inventor David Tye and commonly assigned herewith.~~

Please replace paragraph [00013] with the following amended paragraph:

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With respect to FIGS. 2A, 2B, 2C, 2D, a frame 202 comprises beams 204 coupled with one another, the end of each beam connecting with the end of another beam with plates [[204]]206. A handle 208 is mounted to frame 202. The axis of the handle 208 is normal to the plane of the frame 202. Two support beams 210 flanked on either sides of handle 208 provide additional support to handle 208. Both support beams 210 are mounted on the frame 202 and are connected to the handle 208. A set of rods 212 normal to the plane of frame 202 is centrally positioned between support beams 210. Set of rods 212 allows a slider 214 to slide on set of rods 212. A beam 216 is mounted transversely on slider 214 so that the direction of beam 216 is parallel to the plane of frame 204. Several evenly spaced rods 218 are mounted perpendicularly on beam 216 so that the direction of rods 218 is normal to the plane of frame 204. In particular, each rod 218 is coupled to the beam 216 at one end of each rod 218. The number of rods 218 corresponds to the maximum capacity of the tool. Each rod 218 may be capable of supporting one empty bottle.

[Please replace paragraph [00014] with the following amended paragraph:]

Rods 218 slide through guides 220 which are mounted on frame 204 to provide support and direction to rods 218. The end of each rod 218 opposite to beam 216 is attached to a drive 222 coupled to a claw 224. The drive 222 may be powered with any conventional manner: electrical, hydraulic, and pneumatic. Claw 224 comprises of three complementary circular pieces accommodated to receive the neck of a bottle. Drive 222 allows claw 224 to tighten and secure the neck of the

A2 bottle. A pressure sensor (~~not shown~~)225 coupled to claw 224 may sense the amount of force or pressure applied to the claw 224. A bottle full of water or fluids may overload and stress rods 218 when the bottle is grabbed by the neck with claw 224. Claws 224 are mainly designed for grabbing and holding empty bottles.

Please replace paragraph [00016] with the following amended paragraph:

A3 FIG. 3 is a side view of an example of a tool on a robot arm used in a bottling operation according to specific aspects of the present invention. Tool 302 is mounted on a robot arm 304. Empty bottles 306 are located in a rack 307 on a first platform 308. Full bottles 310 are located on a second platform 312. First platform ~~[[310]]~~308 is higher than second platform 312. The robot arm uses tool 302 to unload empty bottles 306 on support 312 while simultaneously loading full bottles 310 in the rack on support 308. For each trip the robot arm makes from platform 308 to 310 or 310 to 308, full bottles 310 are loaded in the rack and empty bottles 306 are unloaded on platform 312.

Please replace paragraph [00021] with the following amended paragraph:

A4 FIG. 4 is a flow chart of how a tool for a robot arm used in a bottling operation operates according to specific aspects of the present invention. This operation is illustrative only, the tool can either start loading empty bottles at a rack location or loading full bottles at a loading location. Also, the tool can be used to either load full or empty bottles into the rack. In FIG. 4, the rack location means the location of a rack containing empty bottles as illustrated by rack ~~[[306]]~~307 of FIG. 3. The loading location is illustrated by platform 312 of FIG. 3.

Please replace the title of invention with the following:

A5 Bottle Loading and Unloading Tool With Extendable Arms